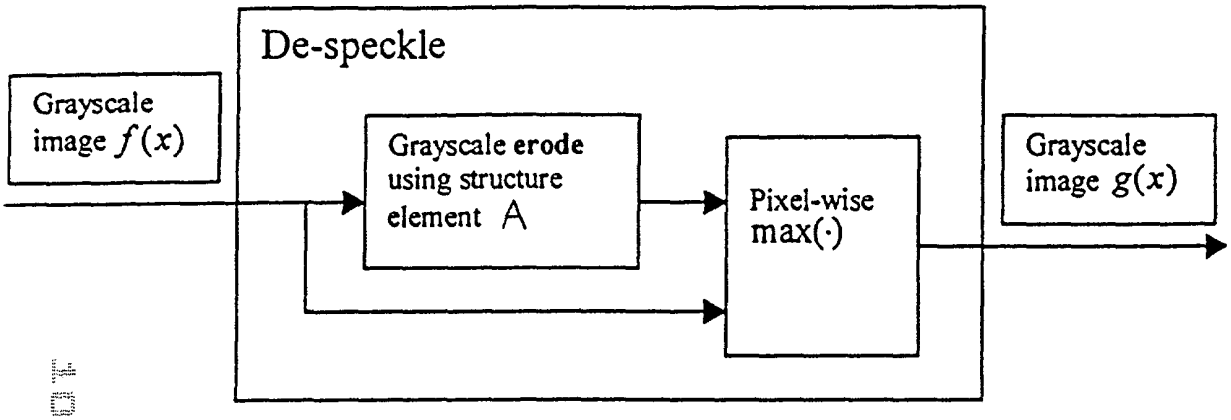


Figure 1: Block diagram of de-speckle algorithm – basic approach.

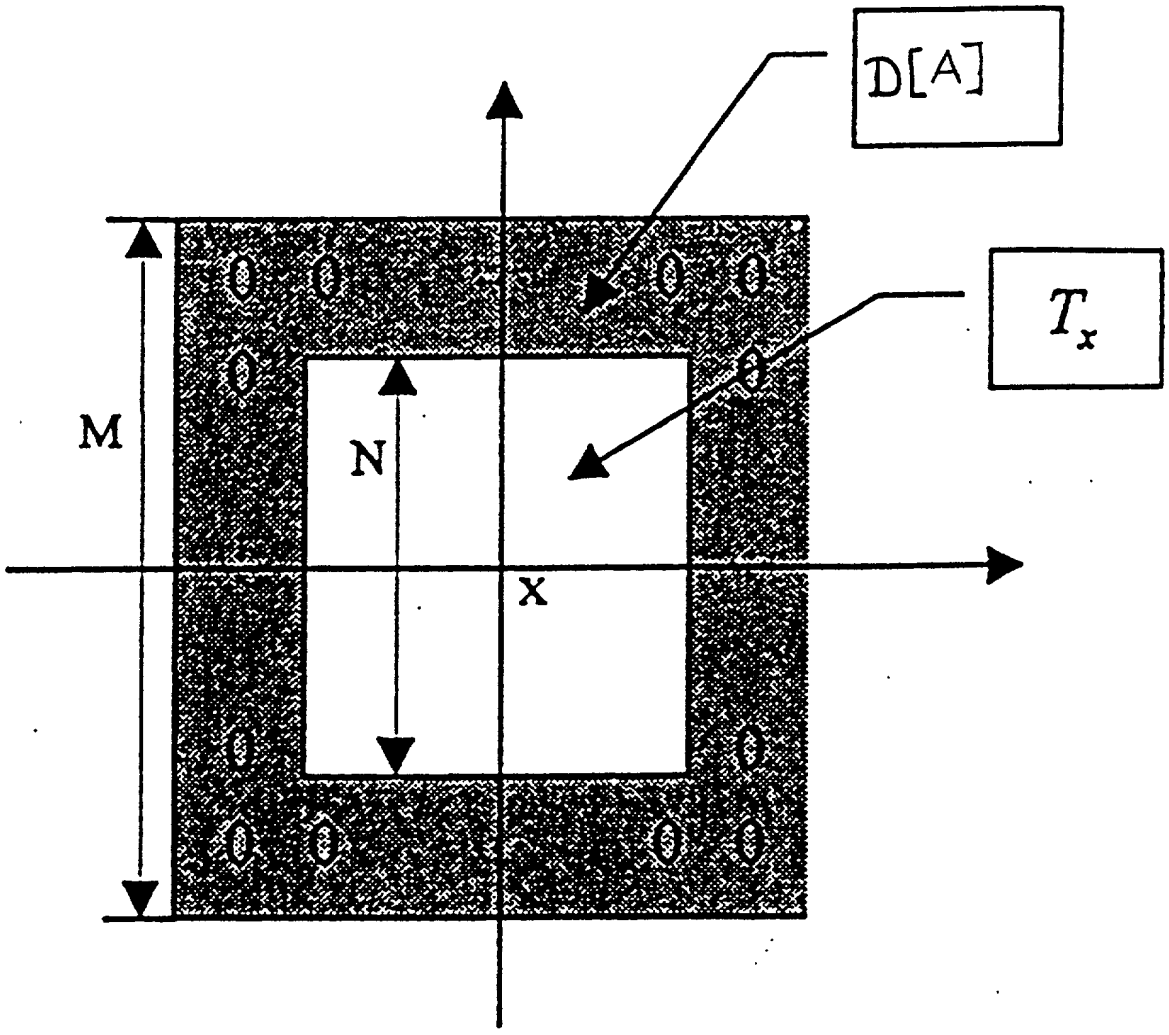


Figure 2. Annular window.

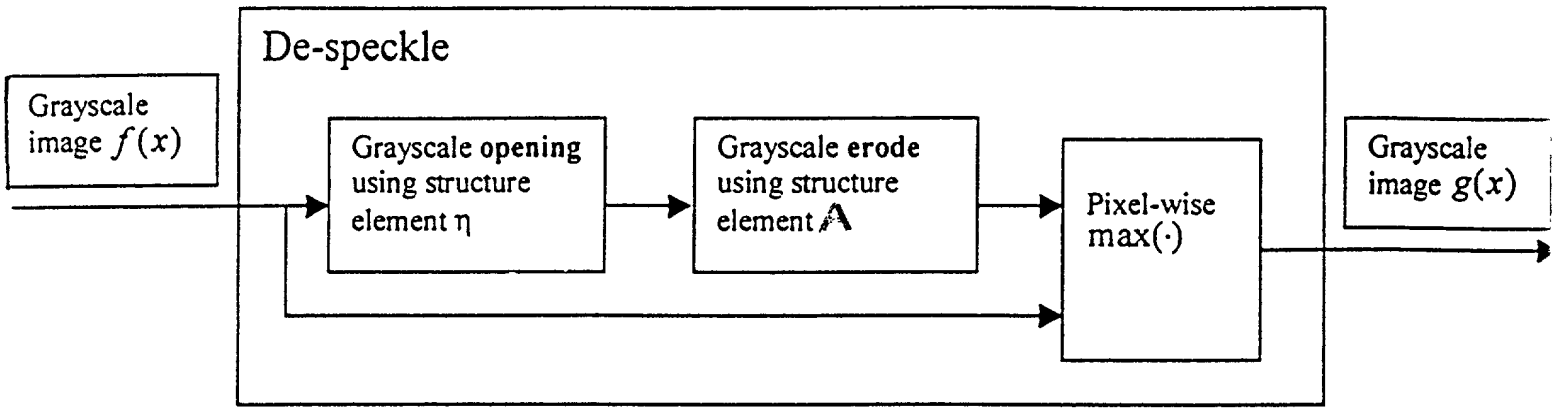


Figure 3. Diagram of grayscale de-speckle algorithm with halftone protection

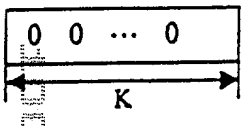


Figure 4

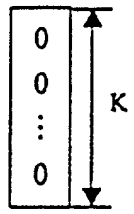


Figure 5

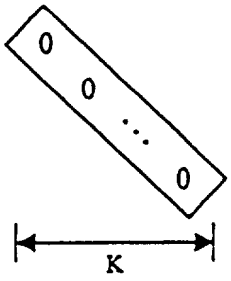


Figure 6

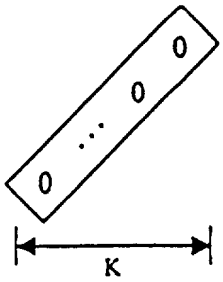


Figure 7

Structuring elements used in halftone protection.

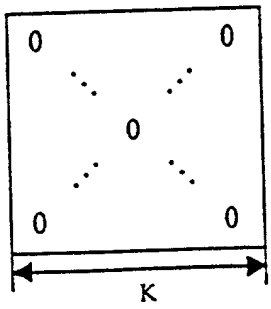
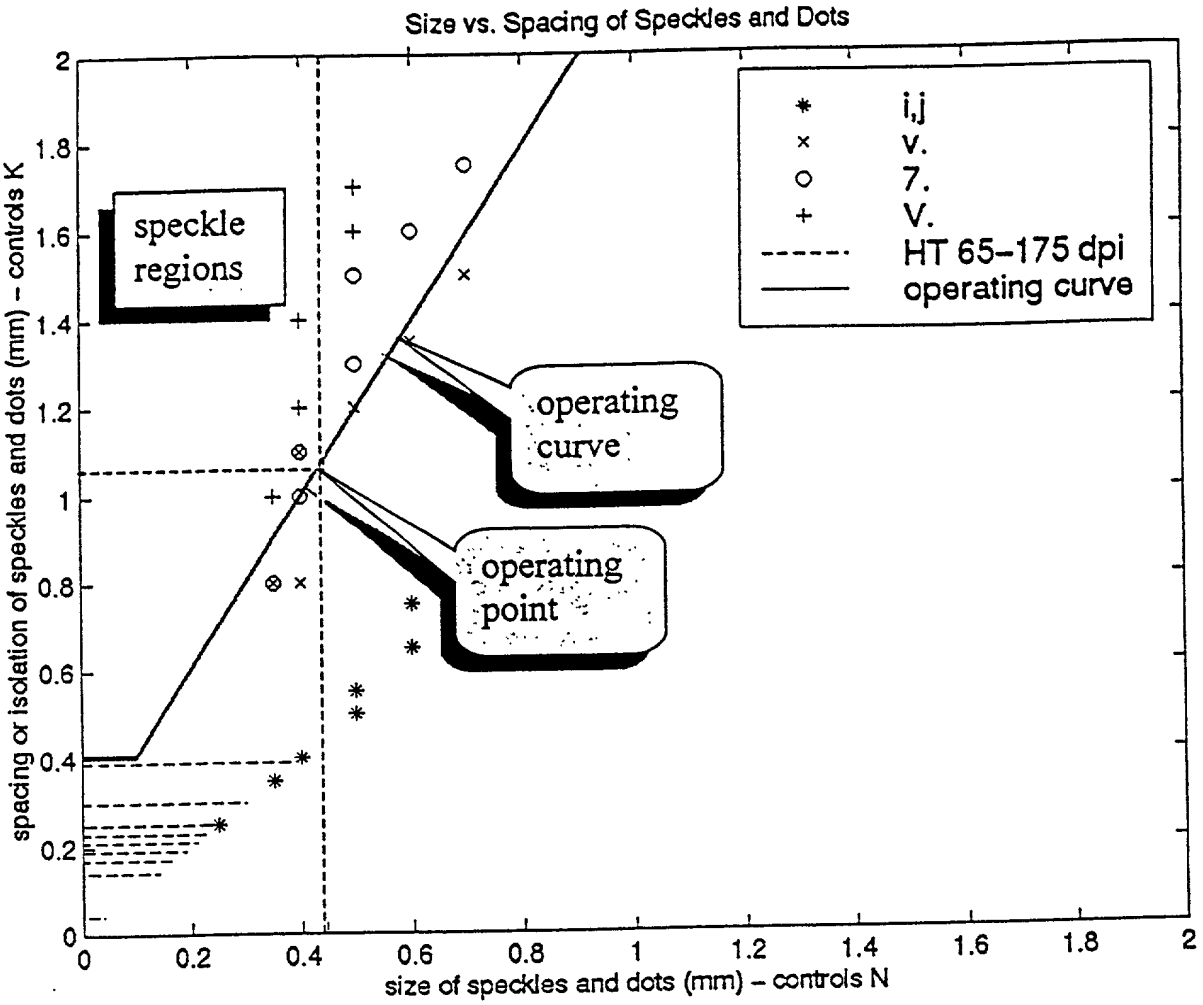


Figure 8



Parameter optimization – operating curve and operating point. The x-axis is the size of speckles and dots that need to be preserved. The y-axis is the spacing between speckles and dots that need to be preserved to the nearest objects.

Figure 9

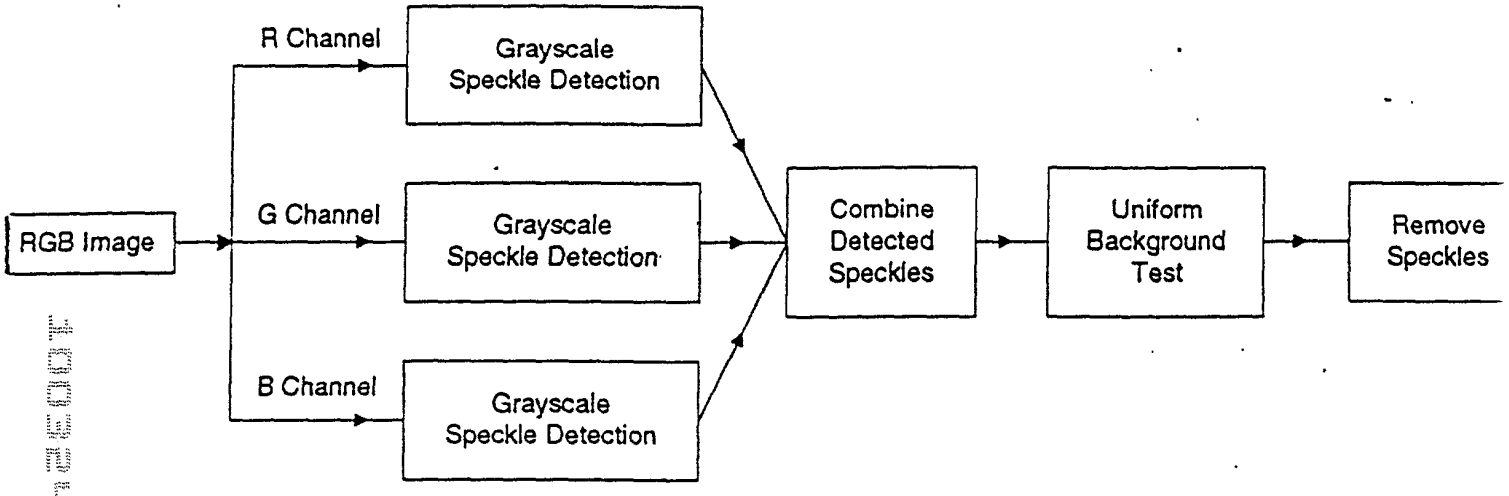
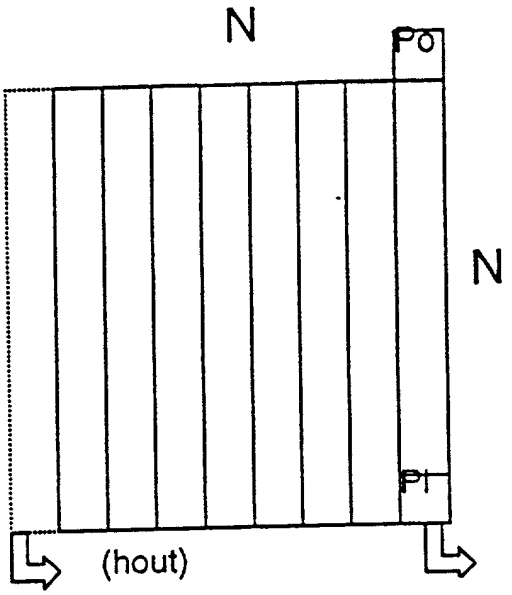


Figure 10. Block diagram of the color de-speckle algorithm.



8 level / N Point Histogram for video above this pixel

Figure 11